



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,737	02/10/2004	Timothy W. Budell	END920030087US1	3620
28264	7590	10/20/2004	EXAMINER	
BOND, SCHOENECK & KING, PLLC ONE LINCOLN CENTER SYRACUSE, NY 13202-1355			TSUKERMAN, LARISA Z	
			ART UNIT	PAPER NUMBER
			2833	

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/776,737

Applicant(s)

BUDELL ET AL.

Examiner

Larisa Z Tsukerman

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-15 is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Bezama et al. (6332782).

In regard to claim 1, Bezama et al. disclose a redistribution package 10 for connecting an integrated circuit chip 70 to a circuit board 80, comprising:

- a) an upper surface 20 extending in a first plane and including a plurality of upper contacts 72(22/26) disposed thereon for electrically interconnecting the upper surface 20 to the integrated circuit chip 70;
- b) a lower surface 30 extending in a second plane and including a plurality of lower contacts 32/36 disposed thereon for interconnecting the redistribution package 10 to the circuit board 80; and
- c) a plurality of conductors 42 extending **angularly** through the redistribution package 10 and interconnecting each of the plurality of upper contacts 72(22/26) to corresponding ones of the plurality of lower contacts 82(32/36).

In regard to claim 6, Bezama et al. disclose the first 20 and second planes 30 are essentially parallel to one another.

In regard to claim 2, Bezama et al. disclose most of the claimed invention except it is silent that the plurality of conductors includes signal carrying conductors, ground conductors and power conductors. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. See Ex parte Wikdahl, 10 USPQ2d 1546, 1548 (Bd. Pat. App. & Inter. 1989); Ex parte Masham, 2 USPQ2d 1647, 1648 (Bd. Pat. App. & Inter. 1987); In re Casey, 370 F.2d 576, 152 USPQ 235, 238 (CCPA 1967); see also M.P.E.P. § 2111.02.

"Intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art." M.P.E.P. § 2111.02 (citing In re Casey, 152 USPQ 235 (CCPA 1967) and In re Otto, 136 USPQ 458, 459 (CCPA 1963)).

In regard to claim 3, Bezama et al. disclose the signal carrying conductors, the ground conductors, and the power conductors are positioned in respective concentric rings in all planes parallel to the first plane (see Fig. 3 and 4).

In regard to claim 4, Bezama et al. disclose each of the signal carrying conductors 42 is surrounded by a plurality of ground conductors.

In regard to claim 5, Bezama et al. disclose each ground conductor 42 is of a first cross-sectional width and a first cross-sectional thickness at a position adjacent to the upper surface 20 and a second cross-sectional width and a second cross-sectional thickness at a position adjacent to the lower surface 30, wherein the first cross-sectional width **is less** than the second cross-sectional width and the first cross-sectional thickness is less than the second cross-sectional thickness (see Fig.5 and 6).

Art Unit: 2833

Allowable Subject Matter

Claims 7-15 are allowed.

The following is an examiner's statement of reasons for allowance: The prior Art does not teach or suggest a redistribution package for connecting an integrated circuit chip to a circuit board characterized by **one power layer** essentially parallel to and coextensive with the upper surface for distributing power to the integrated circuit chip and a plurality of vias connected to the upper contacts each of which is electrically isolated from and extends through the power layer, and a plurality of conductors interconnecting each of the plurality of vias to a corresponding one of the plurality of lower contacts.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Larisa Z Tsukerman whose telephone number is (571)-272-2015. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A Bradley can be reached on (571)-272-2800 ex. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2833

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LT, 10/18/2004



THO D.TA
PRIMARY EXAMINER